

**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/JP03/13931

**A. CLASSIFICATION OF SUBJECT MATTER**  
Int.Cl<sup>7</sup> H03K19/0185

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
Int.Cl<sup>7</sup> H03K19/0185

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Jitsuyo Shinan Koho 1926-1996 Toroku Jitsuyo Shinan Koho 1994-2003  
Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 10-84274 A (Matsushita Electric Industrial Co., Ltd.), 31 March, 1998 (31.03.98), Figs. 7, 8, 10, 3, 4 (Family: none)	1-5, 9, 10, 51, 64
A	JP 10-84274 A (Matsushita Electric Industrial Co., Ltd.), 31 March, 1998 (31.03.98), Figs. 7, 8, 10, 3, 4 (Family: none)	6-8, 11-50, 52-63, 65, 66
A	JP 2001-68991 A (NEC IC Miconsystem Kabushiki Kaisha), 16 March, 2001 (16.03.01), Fig. 1; Par. Nos. [0046] to [0047] (Family: none)	6

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents:  
"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier document but published on or after the international filing date  
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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
"&" document member of the same patent family

Date of the actual completion of the international search  
25 November, 2003 (25.11.03)

Date of mailing of the international search report  
09 December, 2003 (09.12.03)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

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PCT/JP03/13931

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 11-239051 A (NEC Corp.), 31 August, 1999 (31.08.99), Figs. 1, 4; columns 30 to 31, 42 & US 6094083 A	6
A	JP 2000-349618 A (Matsushita Electronics Corp.), 15 December, 2000 (15.12.00), Fig. 4, columns 12, 46 to 47 (Family: none)	7
A	JP 11-205140 A (Mitsubishi Electric Corp.), 30 July, 1999 (30.07.99), Figs. 8, 4, 5 & US 6091351 A	56
A	JP 11-195975 A (Hitachi, Ltd.), 21 July, 1999 (21.07.99), Fig. 3 & US 6249145 B1	56
A	JP 11-261401 A (Sharp Corp.), 24 September, 1999 (24.09.99), Fig. 3 & US 6002290 A	60
A	JP 9-74348 A (Seiko Epson Corp.), 18 March, 1997 (18.03.97), Figs. 1, 2; columns 7 to 11 (Family: none)	1-66
A	JP 2000-124792 A (New Japan Radio Co., Ltd.), 28 April, 2000 (28.04.00), Page 1, abstract (Family: none)	1-66
A	JP 7-264047 A (Fujitsu Ltd.), 13 October, 1995 (13.10.95), Fig. 1; columns 22 to 25 (Family: none)	1-66